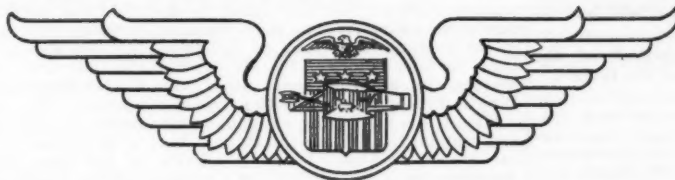


CIVIL AERONAUTICS JOURNAL



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ISSUED TWICE MONTHLY BY THE CIVIL AERONAUTICS AUTHORITY

Volume 1

WASHINGTON, SEPTEMBER 15, 1940

Number 18

Hinckley and Branch Report on Civil Aeronautics

Assistant Secretary of Commerce Discusses Civilian Pilot Training Program While Chairman Branch Outlines Work of Civil Aeronautics Board

Commemorating the completion of 2 years of work by the Civil Aeronautics Authority, Assistant Secretary of Commerce Robert H. Hinckley and Chairman Harlee Branch of the Civil Aeronautics Board on August 21 made Nation-wide radio addresses on the "state of the Nation," so far as civil aeronautics are concerned.

Mr. Hinckley's portion of the joint broadcast dealt mainly with the Civilian Pilot Training Program. As a result of the 18-months-old program, more private pilots were trained last year in the United States than in any previous 4-year period, he declared.

In an outline of progress of the current phase of the program, Mr. Hinckley said that more than 30,000 students, now in ground schools, will be ready for flight training in September. Nearly 16,000 students, now in flight schools, will get private pilot's certificates in September. They fly, each day, a total distance equal to 20 times around the earth.

During this year, the Civilian Pilot Training Program flight training—coupled with instructor and refresher courses, secondary training for Civilian Pilot Training Program students, and numerous other improvement courses in the lower grades—will give instruction to more than 80,000 Americans.

"And it will be done—not by regimentation or at sacrifice of individual liberty, but by free men, through co-operation between Government and free private enterprise," he concluded.

For his portion of the broadcast, Mr. Branch discussed the new Civil Aeronautics Board and its duties under the recent Presidential reorganization order which created the Board.

TEXT OF MR. HINCKLEY'S ADDRESS

"The conquest of Europe has made millions of Americans air-minded this year. Millions who took little note of the great upsurge of the airplane as an instrument of peaceful commerce now we are aware acutely of it as a terrifying instrument of war.

"We are besieged with questions. And they are not questions about the past. They are not inquiries about the vast increase in miles flown and passengers carried by the airlines. They are not about the development of a great network of Federal airways, with beacons, radio beams, and teletype communication. They do not concern how American transport airplanes became the world's best, or how our airlines became the safest in the history of commercial aviation.

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Report on Civil Aeronautics

(Continued from preceding page)

"They ask, in a great many troubled ways, about the present and the future. They grant the great progress we have made in the field of peaceful commerce. But they want to know how this can help us, if necessary, in the defense of our borders and our way of life.

"As the Assistant Secretary of Commerce, I speak for the administrative side of civil aviation. The Administrator of Civil Aeronautics, under this Department, is responsible for construction, operation, and maintenance of the Federal airways system, inspection and certification of aircraft and airmen, pilot training, airports, and enforcement of the regulations laid down by the Civil Aeronautics Board. Chairman Branch will speak for the regulation makers, who are an independent board.

"In my limited time I believe I can best answer the principal questions by describing just one of the activities of the Government in civil aeronautics. And because the question of airplane pilots is in many people's minds, I will talk about the training of pilots.

"Although Government aid to vocational education is nothing new, civilian pilot training at Government expense is a new type of it—newer, even, than the Civil Aeronautics Authority. It is only about 18 months old.

"It was started in the spring of 1939, cautiously and in a small way. We had been directed by Congress to foster and encourage the development of commercial aviation. We felt that the way to stimulate the aircraft industry was to create more fliers. With the help of the National Youth Administration we tried out an experimental pilot training plan for about 300 college students.

"The experiment was such a great success that last year we asked Congress for enough money to train 20,000 young private pilots. The number was reduced to 10,000; but that was a good beginning, and by June of this year the 10,000 had been trained. I hope that statement doesn't sound too casual, for it means we trained last year more private

pilots than ever had been trained in this country in any previous 4-year period.

"But in that month of June 1940, Congress was launching a great program for national defense. And, mindful of our pilot training, it directed us to expand this program for the present year to about eight times what it was in 1939.

"In other words, the Civil Aeronautics Authority is now asked to do nearly as much civilian pilot training in the current fiscal year as had been done in this country, by all private sources, in all the years since the Wright Brothers invented the airplane.

"That is a staggering assignment by any standard. But we can do it. We can do it because of the peculiarly American basis upon which the Civilian Pilot Training Program was built at the outset.

"It was built upon the idea of mobilizing the civilian facilities of the country. We did not set up our own training centers. This program was education, so we offered Federal aid to colleges which would conduct ground schools, and to commercial flying schools which would give flight courses.

"Nearly 450 colleges and universities qualified, together with about 550 flying schools, from coast to coast. We prescribed the standards and provided inspection and examination. More than 90 percent of the students who began the course completed it and received private flying certificates.

"How is the current program moving—the program eight times as large? Well, more than 30,000 students, now in ground schools, will be ready next month. Nearly 16,000 students, now in flight schools, will get private certificates next month. They fly, each day, a total distance equal to 20 times around the earth. A second group of 16,000 will take to the air then, and a third group of 16,000 will begin at mid-term. All will be finished next June; but that is only about half the story.

"To provide more flight teachers and examiners, 1,000 seasoned fliers with experience as instructors now are undergoing further rigid training.

"To mobilize and reclaim every airman in America who can help the Nation take wing, refresher or 'brush-up' courses are being offered to more than 5,000 former pilots who have allowed their certificates to lapse.

"And, finally, more than 9,000 holders of private certificates are to be given secondary training on heavier airplanes comparable to military trainers. All of these students must pass military physical examinations, given by Army and Navy medical men. They will have, at completion, 80 hours of flight experience, which is equal to the primary course in the Army or Navy. It is our belief they can step at once into specialized military training. Eleven hundred and fifty of these began the course in July and will finish it in October. Three thousand more then will begin it, and another 5,000 at the mid-term.

"Adding numerous other 'improvement' courses in the lower grades, this program will give a degree of flight

training, during this year to more than 80,000 Americans.

"And it will be done—not by regimentation or at sacrifice of individual liberty, but by free men, through cooperation between Government and free private enterprise."

TEXT OF MR. BRANCH'S ADDRESS

"Tomorrow begins the third year of the Civil Aeronautics Authority and I welcome this opportunity to join with Mr. Hinckley in a report to the people of the country. Civil aviation in the United States has never been in a better position. The past 2 years have witnessed an almost unbelievable growth.

"While the recent reorganization order of the President put the Civil Aeronautics Board within the framework of the Department of Commerce and transferred certain administrative functions to the Administrator of Civil Aeronautics, the Board continues to be an independent agency of the Congress. As Mr. Hinckley has told you, the Authority administers and promotes; we of the Board have a different job to do. Our duties in the main are of a quasi-judicial and quasi-legislative character, and we are charged with the responsibility for both economic and safety regulation of civil aviation.

"This means that we prescribe the rules for air traffic and the minimum standards which must be met by pilots, planes and engines if flying is to be safe. We must also provide the economic regulations for the business of air transportation. When an airline wants a certificate for a new route or to extend

(See Report, page 426)

NEW AERONAUTICAL PUBLICATIONS

Among recent Government publications dealing with the subject of aeronautics are the following:

CIVIL AERONAUTICS AUTHORITY.—CIVIL AIR REGULATIONS, PART 01: aircraft and airworthiness certificates, effective July 15, 1940, as amended; 4 pages, price 5 cents. Classification number CA 1.19: 01.

CIVIL AIR REGULATIONS, PART 02: type and production certificates, effective July 15, 1940, as amended; 2 pages, price 5 cents. Classification number CA 1.19: 02.

CIVIL AIR REGULATIONS, PART 27: aircraft dispatcher certificates, effective July 15, 1940, as amended; 4 pages, price 5 cents. Classification number CA 1.19: 27.

WAR DEPARTMENT.—ARMY REGULATIONS NO. 95-5: general provisions for Air Corps 3 pages, price 5 cents. Classification number W 1.6/1:95-5.

SENATE COMMERCE COMMITTEE.—HEARINGS ON S. 3620: a bill to provide for Federal cooperation with the States in the development of aircraft landing areas adequate to provide for the national defense, the Postal Service, and for civil aeronautics; 87 pages, price 10 cents. Classification number Y 4.C 73/2: A1 7/5.

When ordering these publications, send remittance by postal money order, express order, coupons, or check to the Superintendent of Documents, Government Printing Office, Washington, D. C. Always give title, issuing office, or classification number when listed.

AIR SAFETY

First Safety Bureau Report:—

Director Lederer Discusses Causes of Crashes Involved and Offers Brief Comments for the Safety Education of Pilots

The nation's scheduled domestic air carriers continued their enviable safety record during July completing the 16th consecutive month of operations without an accident resulting in serious injury or fatality to any person, according to the first monthly report by Jerome Lederer, Director of the new Safety Bureau of the Civil Aeronautics Board.

In addition, the United States airlines flying beyond continental borders in Latin America, to and within Alaska, to China, and to New Zealand in the Pacific, and between the United States and Europe, on August 13 completed a year of operations with a similar absence of serious accident.

For nonscheduled flying, however, July was the worst month in the past 2 years, Mr. Lederer said, although by comparison with private operation, the Civilian Pilot Training Program came off "fairly well." During the month four fatal accidents occurred in the program. Previously, only two such fatalities had marred its entire record. Despite these deaths, the Civilian Pilot Training Program is still "many times safer" than any training program previously conducted, he added.

In other types of nonscheduled flying, there were 29 fatal accidents, many of which could have been avoided through the exercise of more good common sense by the pilots involved, he declared:

"Impressed by a long record of statistics showing that many accidents are caused by a lack of schooling on the part of the pilot or by shortcomings of airplane performance, "Mr. Lederer continued, "the Civil Aeronautics Authority has taken real steps to improve the standards of all civilian training and to encourage the development of planes which are inherently difficult or impossible to put into spins, no matter what the action of the pilot. But any study, especially of these accidents which result in fatalities in nonscheduled flying, puts a large measure of blame squarely upon the shoulders of the flyer.

"It is our intention to drive home this principle through every means of education we can enlist. I have before me nine accident reports, each one summarizing a recent fatal accident. I offer the brief sentences inserted under 'Remarks' as required reading for every nonscheduled pilot:

1. Pilot spiraling over a parade at low altitude, went into a power spin;
2. Student pilot carrying passengers (in direct violation of regulations) lost control at 400 feet and aircraft spun in;
3. Pilot turned at take-off and dove at some parked cars—struck a spectator and then struck ground;
4. Inexperienced pilot deliberately flew into a violent squall and spun in;
5. Student pilot flew into area of fog, got on top and flew out to sea—apparently let down into water;
6. Both glider pilots, apparently so intent on taking advantage of favorable thermal currents that each failed to observe the other aircraft, resulting in a collision;
7. Pilot took off at night to determine height of ceiling (no instrument equipment). Aircraft spun in;
8. Evidence indicates that rib structure of right wing failed in the air due to excessive stress applied during acrobatic maneuvers. Pilot and passengers were not equipped with parachutes. (In violation of regulations for acrobatic maneuvers.)
9. Pilot flying over the top of what he thought were clouds—attempting to descend through cloud layer, discovered cloud in reality was a ground fog. Crashed.

"Certainly a number of these accidents do involve spins, and we hope that this element of danger will some day be eliminated from aviation, but meanwhile it is possible to offset dangers of spinning by avoiding situations where inadvertent spins are most apt to occur. It has long ago been remarked that no

conceivable airplane is purely 'proof against a fool.' No real safety can be achieved until every pilot who takes to the air is fully conscious of the responsibilities that he thus assumes to himself, to his passengers, to other airmen, and to the lives and property of the public."

Officials Confer on Methods for Safe Air Traffic

Conference Discusses Possibility of Segregating Military and Civil Aeronautic Training from Airline and other Types of Air Traffic

Ways and means for the safe and efficient control of air traffic under the increasingly congested conditions brought by the present emergency aviation expansion program and the constant growth of the airlines was the subject of a conference held here on August 27. Attending the meeting in the offices of the Civil Aeronautics Board were representatives of the Board, the Navy Bureau of Aeronautics, the Army Air Corps, the Administrator of Civil Aeronautics, the Assistant Secretary of Commerce, and other Government aeronautic officials.

A major topic under discussion was the possibility of segregating both military and civil training activities from airline and other types of air traffic. The group agreed to organize a committee to study the problems presented and to make specific recommendations as to policy to be followed.

"Serious air traffic problems are being posed by the rapid increases in civilian and military aviation," Harlee Branch, Chairman of the Board, said, following the meeting. "Our discussion today gave special attention to the possibilities of relieving existing traffic congestion and preventing its increase by segregation of both military and civil training activities from airline and other types of traffic that can be controlled by means of two-way radio in thick weather.

"An agreement was reached that the basic factor is in the establishment of more airports. The Department of Commerce and the W. P. A. are concentrating on this now, but the hope was expressed by the representatives of all branches present that a real airport program will be considered by Congress. We discussed also the general problem of air traffic control jurisdiction, as between the cities where the airports are located and the Federal Government, and the need of stepping up flight information and safety education campaigns.

"The meeting agreed to organize a technical committee for immediate and comprehensive study of these problems, to make specific recommendations as to policy and to locate currently critical spots for more complete control."

Air Transportation

Board Permits Pan American To Fly Short-Cut Route

Temporary Approval Given in Exemption Order To Operate Over "Brazilian Cut-Off" Between Belem and Rio

Operation by Pan American Airways, Inc., over the "Brazilian cut-off," a direct flight between Belem (Para), Brazil, and Rio de Janeiro, via Barreiras, Brazil, to be begun on September 1, was given temporary approval on August 29 by the Civil Aeronautics Board in an exemption order.

Since final approval, according to the provisions of the Civil Aeronautics Act, must await formal hearing of the application by the Board, and such delay would work a hardship on the company as well as delay improved transportation of passengers, mail and express, the exemption was considered necessary in the public interest. The application itself is for an amendment to Pan American Airways, Inc.'s "grandfather certificate."

The new route will save 950 miles over the present operation, which follows the line of the coast of Brazil. The coast route is 2,475 miles in length, with the new direct line only 1,530 miles. Three trips a week are to be operated, with a fourth, supplemented by local service of P. A. A.'s subsidiary, Pan Air Do Brazil, continuing along the old coast route.

It was stated by the company that the new schedules would mean that the present flying time of 48½ hours from Miami, Fla., to Buenos Aires, Argentina, with 5 nights' lay-over, would be cut to 33½ hours flying time with only 3 nights' lay-over. The flying time over the cut-off would be only 8¾ hours instead of the 17¾ hours now required around the coast.

Pan American's application had requested that the Board hold its hearing prior to September 1, so that service might be inaugurated at that time, and asked that, if it was not possible to hold the hearing at such short notice, the exemption order be entered.

The Board, following this request, stated in its order that it appears: "that the shortening of the elapsed time required for flights from points in the United States, Central America, the Caribbean, and northern South America and points in southern South America will result in improved air transportation service for persons, property, and mail and would be in the public interest; and that such improvement in the transportation and communications between points in the United States and

points in South America is in accord with the 'good neighbor' policy enunciated by this Government and will contribute to the program of hemisphere solidarity agreed to by all of the American Republics."

The Brazilian Government approved operation over the cut-off on August 27.

C. A. B. Grants United More Schedules and Revises Mail Pay Rates

Approval of additional schedules on Routes 1, 11, and 12 of United Air Lines, owing to traffic increases, and the consequent revision of the rates of mail pay for these routes, were announced on August 27 by the Civil Aeronautics Board.

The base mail rates were set at 17.5 cents per airplane-mile for Route 1; 18 cents per airplane-mile for Route 11; and 26 cents per airplane-mile for Route 12. Base pay of 37 cents per airplane-mile continues for Route 17, also operated by United, for the first 300 pounds of mail plus 2.5 percent of such base rate for each additional 25 pounds, or fraction thereof. The approval of these additional schedules has but a slight effect on the total mail compensation which the carrier receives as the result of the rates recently fixed by the Board.

Route 1 covers operation between the coterminal points New York City and Newark, N. J., and the terminal point Oakland, Calif.; Route 11, between Seattle, Wash., and San Diego, Calif.; Route 12, between Salt Lake City, Utah, and Seattle and Spokane, Wash.; and Route 17, between Denver, Colo., and Cheyenne, Wyo.

Braniff Certificates Amended for Mail Transportation

Certificates of public convenience and necessity on the routes of Braniff Airways, Inc. between Houston and

San Antonio, Tex., and between Houston and Corpus Christi, Tex., have been amended by the Civil Aeronautics Board to authorize the carriage of mail in addition to the carriage of passengers and express, as authorized by the original certificates which were granted under the "grandfather" clause of the Civil Aeronautics Act of 1938.

Eastern Air Lines, Inc. appeared in the case as an intervener, contending that it was operating on the same routes, held certificates which authorized it to transport mail, passengers and property and that it would supply any needed service by additional schedules of its own.

The Board, however, stated in its opinion that: "If, then, it is recognized that (a certain number of) schedules daily are required in the interest of commerce, and if that number are to receive the consideration of the Government in the fixing of mail rates, it would appear appropriate to the requirements of public convenience and necessity that at least that minimum of operation which the applicant (Braniff Airways, Inc.) would in any event be obligated to maintain under the terms of its 'grandfather' certificate should be included among the recognized schedules."

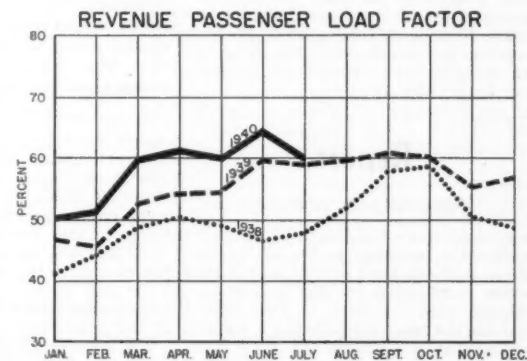
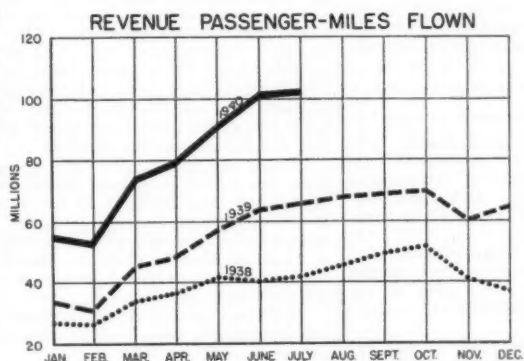
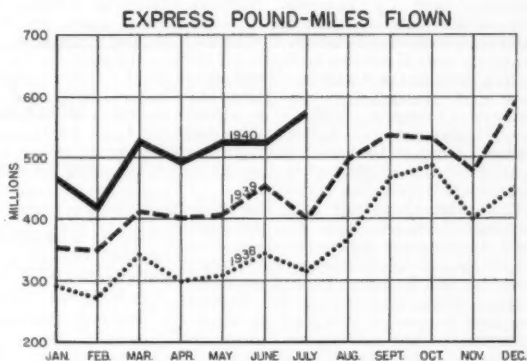
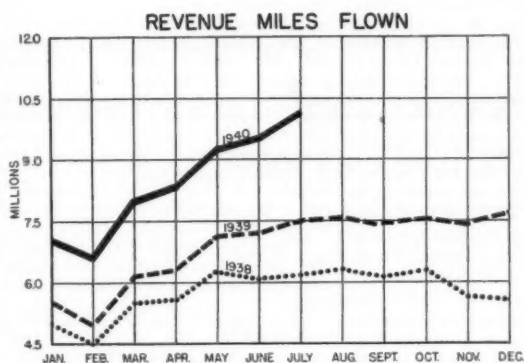
"This would appear more appropriate than that the intervener alone should be encouraged to make further extensions of its service and to add new schedules to the extent that may be necessary to meet the full requirements of commerce and the Postal Service."

STATISTICAL SUMMARY

Scheduled domestic air carriers during July continued to show substantial gains in all classifications of traffic statistics as compared with July 1939, according to reports filed with the Civil Aeronautics Authority. The increases ranged from 34.20 percent for revenue miles flown up to 61.39 percent for revenue passengers carried.

The 17 airlines covered in the report flew a total of 10,120,569 revenue miles in July, a gain of 34.20 percent over July last year. Revenue passengers carried aggregated 275,847, an increase of 61.39 percent over the year. Revenue passenger-miles flown were 102,386,724, up 55 percent, and express pound-miles flown totaled 570,817,288, a gain of 44.85 percent. The July revenue passenger load factor was 59.98 percent against 58.22 percent in July 1939.

Domestic Air Carrier Statistics for 1938, 1939, and the First 7 Months of 1940



Domestic Air Carrier Traffic Statistics for July, 1940

Operator	Revenue miles flown		Revenue passengers carried		Revenue passenger-miles flown		Express pound-miles flown		Revenue passenger-load factor (percent)	
	July 1940	Percent change over 1939	July 1940	Percent change over 1939	July 1940	Percent change over 1939	July 1940	Percent change over 1939	July 1940	July 1939
American Airlines, Inc.	2,467,173	41.90	84,961	64.82	29,507,321	52.87	151,718,031	53.05	67.94	65.52
Boston-Maine Airways, Inc.	93,736	37.54	3,462	59.61	494,136	49.09	609,355	10.04	52.90	48.27
Brant Airways, Inc.	421,774	34.01	10,534	91.42	3,318,973	87.39	12,867,650	22.56	40.36	58.35
Chicago & Southern Air Lines, Inc.	180,792	9.06	4,091	100.73	1,546,308	94.08	6,208,286	49.45	42.92	48.06
Continental Air Lines, Inc.	127,237	25.67	1,706	94.52	513,948	91.51	597,318	19.87	52.97	39.02
Delta Air Corporation	208,174	49.56	4,474	74.49	1,166,546	68.27	1,855,560	43.36	46.54	49.81
Eastern Air Lines, Inc.	1,316,740	40.38	30,526	47.34	11,695,750	54.86	65,650,369	46.65	49.77	45.94
Inland Air Lines, Inc.	102,263	10.84	1,608	51.12	428,192	56.28	513,163	-45.25	41.87	29.70
Marquette Airlines, Inc.	20,376	-29.99	159	-45.36	35,388	-49.88	0		28.95	30.32
Mid-Continent Airlines, Inc.	140,450	25.13	2,151	26.16	617,520	55.22	931,665	-21.56	44.14	44.20
National Airlines, Inc.	86,874	45.10	1,534	138.57	359,065	156.54	671,697	120.41	36.51	24.04
Northwest Airlines, Inc.	546,700	16.41	15,400	40.76	5,905,936	35.94	21,895,194	44.19	54.44	57.09
Pennsylvania-Central Airlines Corporation	411,538	30.74	23,217	102.03	4,110,326	105.46	14,337,928	66.67	58.09	63.55
Transcontinental & Western Air, Inc.	1,406,113	33.11	32,178	65.09	15,863,169	59.81	89,450,557	64.00	62.07	52.18
United Air Lines Transport Corporation	2,258,794	37.48	48,450	56.91	24,954,996	50.58	187,590,631	36.52	66.87	66.68
Western Air Express Corporation	212,403	3.31	4,922	33.93	1,674,900	20.22	15,390,174	4.39	57.51	55.40
Wilmington-Catalina Airlines, Ltd.	29,403	17.80	6,474	20.07	194,220	20.07	439,710	4.15	66.74	66.31
Total	10,120,569	34.20	275,847	61.39	102,386,724	55.00	570,817,288	44.85	59.98	58.22

Imperial Trans-Atlantic Permit Transferred

The Civil Aeronautics Board on August 19 approved the transfer to Airways (Atlantic), Ltd. of the permit formerly held by Imperial Airways, Ltd., authorizing it to engage in trans-Atlantic air service between the United Kingdom and Northern Ireland and the United States via Canada, Newfoundland and Ireland, or via Bermuda. Airways (Atlantic), Ltd. is a wholly owned subsidiary of British Overseas Airways Corp., the latter having been created by the English Government to operate all British flag services.

The original permit was issued to Imperial Airways, Ltd. by the then Civil Aeronautics Authority on August 4, 1939, in substitution for a prior permit given by the Bureau of Air Commerce in June 1936, authorizing the English company to engage in foreign air transportation for the carriage of passengers and mail. The permit was issued in accordance with the reciprocal agreement concluded in 1937 between the Governments of the United States and Great Britain, Canada, and Ireland, covering air service over the Atlantic, and is valid for a period of 15 years from June 1936.

British Overseas Airways Corp. was organized on November 22, 1939, to take over all operations and assets of Imperial Airways and British Airways. Since April 20, 1940, the predecessor British companies have been in process of liquidation by the British Government. The subsidiary, Airways (Atlantic), Ltd., was organized to operate the trans-Atlantic service and requested the Civil Aeronautics Board to transfer the operating permit to it.

Approval of the transference was made by the Board without prejudice to a further transfer if indication is given later by the British Government of another change in the operating company's status.

It is under this reciprocal agreement between the two Governments that Pan American Airways was authorized to operate the New York-Bermuda service as well as the trans-Atlantic service via Bermuda when occasion necessitates. Prior to the establishment of the neutrality zones by Presidential proclamation, Pan American also operated to Ireland and England via Newfoundland.

Report

(Continued from page 422)

its existing route the Board must decide whether the company is 'fit, willing, and able to perform such service and if that service is required by the public convenience and necessity.' The Board must fix the mail compensation for airlines and it is through the mail compensation that Government support is provided. We must pass upon interlocking relationships, mergers, and consolidations. All the facts pertaining to such cases are presented at a public hearing after which decision is reached as to what is best in the public interest.

"Such decisions are not made merely for the moment. The building of our system of air transportation is vital to the Nation's future. It is vital to our commerce, to our Postal Service, to our national defense.

"I often wonder whether people realize the full contribution of civil aviation to this country. Our experience so far, thank God, has been largely with planes that transport us and our packages and letters. In a few short years, we have come to accept such services as a part of our daily lives. We feel abused if there is no airline to serve our own city. It is but 12 years since the first transcontinental line began operating. Yet today there are in the continental United States only 31 cities of more than 20,000 population which are more than 60 airline miles, or roughly 2 hours' highway travel, from some authorized air station. Only 7 cities of over 10,000 population are more than 130 airline miles, or roughly 4 hours' highway travel, distant.

"In that short 12-year period our

American flag lines have spread their network across both the Atlantic and the Pacific, gone north to Alaska and dropped down to the Antipodes, and have circled practically all of the countries of Latin America.

"There are about 100 applications on file now with the Board for new routes. This will give you some idea of the importance air transportation has gained in the public mind.

"When the Civil Aeronautics Act was passed a little over 2 years ago the financial condition of the airlines was so critical that bankruptcy was delayed in many cases only because of the prospect that aid would come as a result of this congressional action. The total net loss on airline operations for the year ending December 31, 1938, was about \$1,250,000. Aid did come. By straightening out governmental tangles, by giving assured continuance of operating rights, by enforcing sound practices the position was changed from threatened disaster to security. Now it is quite a different story. The net profit of our airlines for the year ending April 31, 1940, was nearly 5½ million dollars.

"Another vital factor has helped this favorable balance. That is the striking safety record of the airlines. Since March 26, 1939, there has been no fatality of any passenger or crew member on any domestic air carrier. Over 1,250,000,000 miles of safe flying have been written up and 3,250,000 passengers transported. That we can today make this proudest boast of the world's aviation history is due to the great care of the operators and the cooperation between the operators and the Board.

"Public confidence resulting from this record has shown itself at the ticket offices. The first 6 months of 1940

have seen the largest increase in airline passenger traffic in the history of the industry. This increase is more than twice as large as the increase for the same months in any previous year.

"But we are not content with even this achievement. Private flying is equally our concern. The Safety Bureau of the Board, which has replaced the old Air Safety Board, investigates accidents of all types when they do happen and studies to find ways to keep them from happening again. For example, when the Bureau learns that a student pilot has crashed because he made a mistake, it doesn't stop with finding out what he did wrong—it finds out if his instructor failed to teach him correctly, or if his plane failed.

"The Board itself is the originator of the rules for safe flying. We believe in education as the best means of enforcement.

"I could not conclude this too brief review of 2 years of Government cooperation with civil aviation without some mention of the part being played by our American flag carriers outside our domestic borders. The total route mileage of these carriers in 1938 was 29,179. Since then it has risen to its present figure of 46,500 route miles. The last fatal accident was a year ago—August 13, 1939. Since that time 8,043,588 miles have been safely flown and 156,124 passengers carried.

"I can say to you truthfully that I view the future with real optimism so far as our civil aviation is concerned. Its contribution to our national life cannot be overestimated. On the basis of what has already been accomplished, I can see a much wider expansion within the next few years.

"Without doubt, American aviation will continue to set a pace for the other countries of the world."

PROBE OF CANADIAN COLONIAL ROUTE ORDERED BY BOARD

Investigation of the recently inaugurated service by Canadian Colonial Airways, Inc., between New York and Niagara Falls, N. Y., as a route not authorized by a certificate of public convenience and necessity, was ordered by the Civil Aeronautics Board on August 26.

Canadian Colonial, whose authorized route runs from New York City to Montreal, Canada, began its Niagara Falls-New York operation on August 11. It held that since the service was purely intrastate, there was nothing in the Civil Aeronautics Act that necessitated possession of a certificate issued by the Board. However, on August 21, application for such a certificate was made to the Board.

The Board stated that it had reason to believe the New York-Niagara Falls operation without a certificate was in violation of provisions of the act.

Airways and Airports

Administrator Adds Seven New Air Lanes to Civil Airways List

Col. Donald H. Connolly, Administrator of Civil Aeronautics, on August 10, amended the Designation of Civil Airways by adding a new section covering seven additional airways. The amendment became effective August 12. The additions to the Designation of Civil Airways are as follows:

1. Pueblo, Colo., to Wichita, Kans., Civil Airway.—From the municipal airport, Pueblo, Colo., via the municipal airport, La Junta, Colo.; municipal airport, Garden City, Kans.; and the municipal airport, Hutchinson, Kans.; to the municipal airport, Wichita, Kans.

2. Pueblo, Colo., to Wichita, Kans., Civil Airway (alternate route).—From the municipal airport, Pueblo, Colo., via the municipal airport, La Junta, Colo.; municipal airport, Garden City, Kans.; municipal airport, Dodge City, Kans.; and the municipal airport, Pratt, Kans.; to the municipal airport, Wichita, Kans.

3. Los Angeles, Calif., to San Francisco, Calif., Civil Airway (coastal route).—From the municipal airport, Los Angeles, Calif., via the Goleta airport, Santa Barbara, Calif.; Santa Maria airport, Santa Maria, Calif.; Paso Robles airport, Paso Robles, Calif.; and the municipal airport, Salinas, Calif., to Mills Field, San Francisco, Calif.

4. Detroit, Mich., to Sault Ste. Marie, Civil Airway.—From the Detroit City airport, Detroit, Mich., via the municipal airport, Saginaw, Mich.; Traverse City airport, Traverse City, Mich.; and the Pellston airport, Pellston, Mich.; to the municipal airport, Sault Ste. Marie, Mich.

5. Grand Rapids, Mich., to Traverse City, Mich., Civil Airway.—From the municipal airport, Grand Rapids, Mich., to the Traverse City airport, Traverse City, Mich.

6. Norfolk, Va., to Washington, D. C., Civil Airway.—From the municipal airport, Norfolk, Va., to the National Airport, Washington, D. C.

7. Tallahassee, Fla., to Atlanta, Ga., Civil Airway.—From the municipal airport, Tallahassee, Fla., via the municipal airport, Albany, Ga., to Candler Field, Atlanta, Ga.

Airport Traffic Control Defined for Field Personnel

A person supplying any traffic control or information service which is made available to all aircraft—even though the service may be furnished on a part-time basis at irregular intervals by persons who are regularly employed for an entirely different purpose—must have an airman certificate authorizing him to serve in such capacity.

This ruling is contained in an instruction manual which has been sent by the Airport Traffic Control and General Inspection Sections of the Civil Aeronautics Authority to field supervisors and inspectors. The manual gives the field personnel specific instructions as to methods to be employed in enforcing

AIR NAVIGATION FACILITIES ON SEPT. 1, 1940

AIRPORTS

Municipal airports ¹	642
Commercial airports ²	497
Civil Aeronautics Authority intermediate fields ³	282
Army airdromes ⁴	60
Naval air stations ⁵	21
Marked auxiliary fields ⁶	713
Private fields ⁷	120

Total..... 2,335

Airports and landing fields having any night lighting equipment:	
Municipal.....	303
Commercial.....	92
Intermediate.....	282
Army.....	35
Navy.....	13
Auxiliary.....	31
Private.....	9

Total..... 765

SEAPLANE BASES

Army, Navy, Coast Guard.....	29
Other seaplane bases and anchorages.....	285

Total..... 314

Seaplane bases having any night lighting equipment:	
Navy and Coast Guard.....	5
Other bases and anchorages.....	9

Total..... 14

RADIO AIDS

Ranges.....	279 (4 in Alaska, 2 in Hawaii).
Range stations simultaneous, with voice.....	180 (4 in Alaska).
Range stations non-simultaneous, with voice.....	80

Range stations, no voice.....	19 (2 in Hawaii).
Broadcast stations.....	113 (7 in Alaska).
Broadcast stations, simultaneous.....	106 (4 in Alaska).
Broadcast stations, non-simultaneous.....	5 (3 in Alaska).
Marker stations.....	42
Fan markers.....	83
Voice (only) stations.....	13 (7 in Alaska).

- ¹ Municipally operated, servicing available.
- ² Privately operated, servicing available.
- ³ Operated by C. A. A., no servicing available.
- ⁴ Army operated, open to service planes only.
- ⁵ Navy operated, open to service planes only.
- ⁶ Limited area, no servicing.
- ⁷ Privately operated, no servicing.

Amendment No. 58 to the Civil Air Regulations, which provides for a new method of certification and rating of air traffic control-tower operators.

The definition of airman, the instruction states, includes any individual who serves in the capacity of air traffic control-tower operator. An air traffic control-tower operator is a person who, as a public service, gives directions or advice by radio, visual signals, or other similar means, relative to the movement of aircraft in flight near, or taxiing on, a landing area.

This certification requirement of the Civil Aeronautics Act does not apply to persons using radio or visual signals in connection with the operation of one company's aircraft. For example, an air carrier employee furnishing information or relaying instructions to his company's aircraft is not required to be certificated. Similarly, the requirement does not apply to operators of flying school stations, even though traffic control messages are broadcast occasionally.

The instructions also include specific information as to the holding of examinations of applicants for such certificates, as well as the securing of required ratings which must accompany these certificates. Requirements for special issuance of certificate and ratings, and requirements for periodic endorsements of both, are also contained. Further information on these certificates may be obtained from the Airport Traffic Control Section, Civil Aeronautics Authority, Washington, D. C., or from regional offices. When requesting information, refer to instruction No. 32.

Airport Projects Approved

In accordance with the provisions of section 303 of the Civil Aeronautics Act, the Administrator of Civil Aeronautics has issued certificates of air navigation facility necessity authorizing the expenditure of Federal funds in the operation of the following projects:

AUBURN, MAINE.—\$196,748 for W. P. A. project to construct N.-S. runway, a total distance of 3,700 feet, 150 feet wide. Includes excavation subgrade base and hard surface, plus lighting extensions and 250 feet safety bands each side of runway. Repave with a high type surface No. 3 and No. 4 runways. The project includes 11.5 acres of clearing and grubbing, 66,220 cubic yards of earth excavation, 9,500 cubic yards of rock excavation, 34,100 cubic yards of marl gravel base, 15,400 cubic yards of base and top coat surfacing, 102,330 gallons of asphaltic tar coat and primer, and a field lighting system at Auburn-Lewiston airport.

BANGOR, MAINE.—\$232,393 for W. P. A. project including excavation, gravel base, 8-inch drain tile installation, 30-inch and 24-inch culvert placement, catch basins, and bituminous surfacing at Bangor airport.

(See Airports, page 429)

Manufacturing and Production

Toughness Testing Machine Developed:

New Mechanism Offers Simple Method of Determining Basic Quality of Spruce to be Used in Aircraft

A mechanical "toughness testing" machine, developed by the forest products laboratory at Madison, Wis., has been approved by the Civil Aeronautics Authority for use in determining the basic quality of spruce to be used in aircraft construction.

Commenting on the value of the new machine, an Aircraft Airworthiness Section report points out that toughness in wood, which is essential in many uses, is dependent on a combination of properties, or rather, on the relation of tensile to compressive strength. When the tensile strength is abnormally high for a given density, it is quite common that the compressive strength will be somewhat low. On the other hand, when the tensile strength is abnormally low for its density, the compressive strength is not infrequently normal or above normal. It is significant, further, that relatively small changes in ratio of tensile to compressive strength have an important bearing on the failure in bending, and are accompanied by very large changes in toughness. In addition, incipient decay may have a very marked influence on toughness before its effect is indicated by density. Nor is density a criterion of other defects which have a pronounced effect upon the tensile strength.

Thus, it is seen that density cannot be depended upon to give a reliable criterion of toughness, the report continued. When this property is of importance, therefore, some dependable means of determining it is essential. The toughness machine developed at the forest products laboratory offers a simple method of obtaining the relation of compression to tensile strength.

The report warns, however, that the toughness machine is not recommended as a panacea for all inspection or selection difficulties. Its use is not practical or necessary in cases involving wood inspection where strength is not a prime requisite. In certain special instances, where safety, uninterrupted factory operations, or the like, are dependent on one or a few wooden pieces, the toughness machine should prove of great value. As a means of obtaining suitable airplane material its merit has been demonstrated by tests on continuous beams and also by the comparison of static strength values for structural members studied.

"The toughness tests may be made on samples from the rough stock," the report points out. "If, at this early

stage, a piece is found unsuitable for the purpose intended, the material not only has been kept practically intact to divert to other uses, but the time and effort involved in unnecessary machining and fabrication has been saved. Again, in many cases large quantities of high-grade lumber have been rejected for strength uses because of strains which develop after purchase. Such stock,

REPAIR STATION CERTIFICATES

Repair Stations Issued Certificates of Competency

Lenigh Aircraft Co., Allentown-Bethlehem Airport, Allentown, Pa., approved August 13, 1940, for repair of welded steel tube structure, excluding fittings; wooden structure, excluding box and laminated spars, wood-covered fuselages, wings and control surfaces; fabric covering; assembly; and engines.

Ritchey Flying Service, Meacham Field, Fort Worth, Tex., approved August 7, 1940, for repair of welded steel tube structure; wooden structure; wood-covered fuselages, wings and control surfaces, and box and laminated spars; steel fittings; and assembly.

Transcontinental & Western Air, Inc., LaGuardia Field, N. Y., approved August 7, 1940, for repair of welded steel tube structure; fabric covering; steel fittings; aluminum alloy structure; aluminum alloy fittings; assembly; aluminum alloy propeller blades and/or steel hubs; engines; and instruments.

Wilkins and Musser Aircraft Service, Allegheny County Airport, Pittsburgh, Pa., approved August 27, 1940, for repair of welded steel tube structure; aircraft wooden structure not including box and laminated spars, wood-covered fuselages, wings or control surfaces; fabric covering; steel fittings; aluminum alloy structure; aluminum alloy fittings; and assembly.

Changes in List of Repair Stations Issued Certificates of Competency

Add for repair of aluminum alloy propeller blades and/or steel hubs to The Story-Gawley Co., 6441 San Fernando Road, Glendale, Calif.

Change address of New England Aircraft School, Inc., to 29 Brookline Avenue, Boston, Mass., and add for repair of aircraft aluminum alloy structure; and aluminum alloy fittings.

Change name of Salzman Aircraft Service, Detroit, Mich., to Air Depots, Inc., Detroit City Airport, Detroit, Mich.

even though purchased at a premium, can usually be disposed of only at a sacrifice. If the toughness test were employed for selection, and treatment given to prevent further infection, much of this stock no doubt would be found satisfactory. These are but examples of possible economies which await the use of the toughness machine."

The toughness machine operates on the pendulum principle, but it differs radically from other types in that the load is applied to the specimen by means of a cable fastened around a drum mounted on the axis of the pendulum, rather than by direct impact of pendulum and specimen. If the pendulum is raised to some initial position and allowed to swing freely, it will reach a like height on the opposite side except for a small loss due to friction. When a specimen is in the machine, the pendulum fails to swing to a like height on the opposite side by an amount representing the energy consumed in breaking the piece. Because of its relatively simple operation, technically trained observers are unnecessary for the successful use of the machine.

The toughness machine consists essentially of a frame supporting a pendulum, the whole being arranged so that a measured amount of the energy from the fall of the pendulum may be applied to a test specimen. The pendulum consists of a bar to which is bolted a weight adjustable to different positions, and carries at the upper end a drum or pulley whose center provides the axis of rotation. The toughness specimen is tested as a beam with two vertical pins, adjustable as to span, acting as supports. The force is applied to the center of the specimen (in the standards test) by means of a flexible steel cable passing over the drum. A stationary graduated scale or dial and a vernier operated by the moving drum are provided for reading the angles through which the pendulum swings. The toughness values for specimens tested may be obtained directly from a table which can be prepared readily.

Additional information on the toughness testing machine may be obtained from the Aircraft Airworthiness Section, Civil Aeronautics Authority, Washington, D. C. When writing refer to Report No. 18.

Carburetor Air Intake Icing Prevention Discussed

A series of interpretations of the section of the Civil Air Regulations which states: "An adequate means shall be provided for preventing the formation of ice in engine carburetors," and suggested methods for the accomplishment of this objective, have been prepared by the Certificate and Inspection Division of the Civil Aeronautics Authority.

The intake and carburetor passages should be arranged, in so far as practi-

(Continued on page 429)

Private Flying

Special Flight Tests for Handicapped

To aid in determining the effect of physical deficiencies of applicants for pilot certificates on the safe operation of aircraft, the Administrator of Civil Aeronautics has directed Inspectors to devise special flight tests to determine whether or not these physical deficiencies will interfere with the safe operation of the aircraft.

In giving these tests, inspectors endeavor to determine whether or not the defect described does or may interfere with the safe operation of aircraft controls, bearing in mind the differences in the controls of various types of aircraft, types of brakes, stabilizer locations, and methods of operation, etc. It is not the idea in giving these flight and practical tests to determine primarily the degree of the ability of the applicant to fly, but to determine first wherein his physical deficiency might result in inefficiency or hazard in the operation of aircraft, and second the degree of his ability to fly.

For this reason, each flight test or each practical test given an applicant presents a special individual problem which will tax the inspector's ingenuity to devise and arrange the tests given so that every possible reaction of the applicant with respect to his disability in different maneuvers or conditions of flight or aircraft manipulation will be investigated.

Interested persons may obtain further information on these special tests from the Certificate and Inspection Division, Civil Aeronautics Authority, Washington, D. C. When writing refer to Instruction No. 33.

C. A. R. AMENDMENT No. 67 ADOPTED BY BOARD

The Civil Aeronautics Board has adopted, effective August 20, Amendment No. 67 to the Civil Air Regulations, covering exceptions to physical requirements, by the insertion after subsection (d) in section 20.104 the following new subsection:

"(e) EXCEPTIONS TO PHYSICAL REQUIREMENTS.—An applicant may receive a certificate in spite of a failure to comply with the above physical requirements if his physical deficiency is such as not to interfere with his safe piloting of aircraft. Any applicant receiving a certificate under these conditions may be restricted to particular types of operation or types of aircraft."

Orville Wright Gets Certificate No. 1

In recognition of his unique services to aviation, honorary Pilot Certificate No. 1 was presented to Orville Wright on National Aviation Day, August 19.

Presentation of the certificate, issuance of which was authorized by Congress, was by Edward Warner, vice chairman of the Civil Aeronautics Board, during ceremonies dedicating the Wright Memorial at Dayton, Ohio.

Carburetor Icing Prevention

(Continued from page 428)

cable, consistent with design limitations, so as to avoid the formation of ice, the publication states. A hot-air supply should be provided which is sufficient to permit safe operation under icing conditions, except in the case of Diesel or fuel-injection engines to which special rulings are applied. The use of any screen in the hot-air system is not recommended and will be permitted only where over 100° Fahrenheit heat rise is available and the screen is of a type which service experience has proved satisfactory. However, a screen may be used in the cold-air intake provided it can be shown that no hazard exists if the screen should become clogged.

A separate cockpit control is necessary for each engine to permit the pilot or flight mechanic to vary the carburetor air supply from full cold air to full hot air. This does not prevent the use of a two-position heat control when a 40° rise heater is used. The hot-air valve and controls should be of rugged construction and sufficiently strong to withstand the full loads which can be applied by the pilot to free the valve from an icing condition.

Detailed requirements which must be met by various types of engines under various conditions are contained in the interpretation, which became effective August 1, for all new aircraft submitted for approval. All air carrier aircraft which do not comply with these instructions should be modified to comply by October 1. Other aircraft already in use will be required to comply if the service experience with the type warrants changes to insure safety. Pending compliance with the terms of the new publication, the Division has published instructions which should be followed by all pilots flying air carrier

aircraft with a maximum intake heat of approximately 40°.

Further information as to these interpretations may be obtained by addressing the Certificate and Inspection Division, Civil Aeronautics Authority, Washington, D. C. When writing refer to Release No. 21.

Airport Projects Approved

(Continued from page 427)

BRUNSWICK, MAINE.—\$165,940 for W. P. A. project including common excavation, clay stabilization of safety strips, runway base stabilization, drainage work, erection of hangar and development of 2 strips 500 feet wide and 3,500 feet long at Brunswick airport.

FLORENCE, S. C.—\$24,466 for W. P. A. project including constructing hangar, paving runway, draining, sodding, and performing incidental and appurtenant work. Continuation project includes 25,000 cubic yards of common excavation, 273,000 square yards of sodding and shaping shoulders, 60,000 square yards of asphalt sanding and the erection of an 80 by 100 feet hangar, the material for which is on hand at municipal airport.

JONESBORO, ARK.—\$73,896 for W. P. A. project including 5 acres of clearing and grubbing, structural concrete work, drain tile installation, excavation, and blading and sprigging at State College airport. Also \$56,046 for W. P. A. project for construction of concrete and brick building to be used as an airplane hangar and field house at State College airport.

LEWISTOWN, MONT.—\$39,057 for W. P. A. project including excavation of pit run gravel surfacing, 1,900 lineal feet of drainage, 10,560 feet of fencing and installation of lighting at municipal airport. This supersedes previous approval dated September 9, 1938.

MILLINOCKET, MAINE.—\$167,696 for W. P. A. project to cut the grade on the present N.-W. runway from station 11+00 to station 24+00 for the full 500 feet width and extend the runway another 1,300 feet to a completed length of 3,500 feet and pave both the N.-S. and E.-W. runways. Includes 120,000 cubic yards of excavation, 1,500 lineal feet of drainage ditch, 73,500 square yards of 4-inch asphaltic concrete paving, and field lighting, in connection with completing runways at Millinocket Airport.

MISSOULA, MONT.—\$204,229 for W. P. A. project including excavating, filling, construction, finishing, grading, rolling landing strips, completion of fencing, 355,000 square yards of oil penetration for two runways and in the administration building area, 162,000 cubic yards of grading on runway 3, construction of 20,000 square feet of concrete turnarounds at Missoula County airport. This is additional work on project approved May 3, 1940.

PORTLAND, MAINE.—\$74,335 for W. P. A. project work including 335,000 square yards of borrow, 7,000 cubic yards of gravel base, bituminous macadam paving, safety strip grading, subgrade grading and drainage installation at Municipal airport. This supersedes previous projects approved dated September 16, 1938, and May 3, 1939.

RICHMOND, VA.—\$42,191 for W. P. A. project including 26,067 cubic yards of excavation, 11,944 cubic yards of gravel, 191,112 square yards of finish, grading, 2,100 lineal feet of drainage, 992 cubic yards of concrete for aprons, and installation of added field lighting. Complete new runway—excavate, drain, gravel surface, install new lights and constructing the concrete apron at the S.-W. runway at Byrd Municipal Airport.

SCOTTSBLUFF, NEBR.—\$453.60 for N. Y. A. project for installing boundary cones previously manufactured by the National Youth Administration in Nebraska, installing new fence, and installing water line to provide service at the hangar at municipal airport.

CIVIL AERONAUTICS BOARD

OFFICIAL ACTIONS

Abstracts of Opinions, Orders, and Regulations

FOR THE PERIOD AUGUST 16-31, 1940

ORDERS

ORDER No. 621: *Private pilot certificate of Clinton A. Seal suspended for 60 days.*

The Board on August 16 suspended for a period of 60 days private pilot certificate No. 36294, held by Clinton A. Seal, Salt Lake City, Utah, for piloting an aircraft carrying passengers for hire and other violations of the Civil Air Regulations.

ORDER No. 622: *Dismissed order No. 443 requiring Robert Allman to show cause why his certificate should not be revoked or suspended.*

The Board on August 16 dismissed order No. 433 requiring Robert O. Allman, Overland, Mo., holder of commercial pilot certificate No. 28095, to show cause why his certificate should not be revoked or suspended. (Order accompanied by opinion—Docket SR-41.)

ORDER No. 623: *Extended time in which United may file a petition for rehearing.*

The Board on August 16 extended time in which United Air Lines Transport Corporation may file a petition for rehearing, reconsideration, and reargument of such parts of the Board's order and opinion (order 558, docket 270) as relate to matters other than the determination of the number of schedules required in the interest of the commerce of the United States, the Postal Service, and the national defense.

ORDER No. 624: *Denied petition of Pan American for rehearing in matter of the application of American Export.*

The Board on August 14 denied petition of Pan American Airways Co. (Del.) for rehearing, reargument, or reconsideration of the opinion and order of the Board (order 581, dockets 238 and 319) in the matter of the application of American Export Airlines, Inc.

ORDER No. 625: *Granted application of British Overseas Airways Corporation for transfer to Airways Limited of permit to engage in foreign air transportation.*

The Board on July 29 granted application of British Overseas Airways Corporation for the transfer to Airways (Atlantic) Limited of the permit heretofore issued to Imperial Airways Limited (order 129, docket 147) to engage in foreign air transportation between the United States and the United Kingdom. (Order accompanied by opinion—Docket 401.)

ORDER No. 626: *Suspended student pilot certificate of Stanley Lyon for 180 days.*

The Board on August 20 suspended for a period of 180 days student pilot certificate No. S-4905 held by Stanley Lyon, Kelso, Wash., for piloting an aircraft on a civil airway outside an area within a 50-mile radius of his point of take-off carrying a person other than a certificated instructor.

ORDER No. 627: *Revoked solo pilot certificate of Arthur Green.*

The Board on August 20 revoked solo pilot certificate No. 93321 held by Arthur Green, Indianapolis, Ind., for piloting an aircraft acrobatically at an altitude less than 500 feet above the ground and other violations of the Civil Air Regulations.

ORDER No. 628: *Consolidated applications for certificates of Oregon Airways, United, Nick Bez, and Wallace Air Service into one proceeding.*

The Board on August 20 consolidated applications for certificates of public convenience and necessity of Oregon Airways, Inc., United Air Lines Transport Corporation, Nick Bez, and Wallace Air Service, into one proceeding.

ORDER No. 629: *Reaffirmed previous opinion and order in the matter of the application of United Air Lines for approval of merger with Western Air.*

The Board on August 14 reaffirmed previous opinion and order (order 558,

docket 270) in the matter of the application of United Air Lines Transport Corporation for approval of a proposed acquisition of control of, and of merger with or purchase of all of the assets of, Western Air Express Corporation.

ORDER No. 630: *Private pilot certificate of Hubert Eichhammer revoked.*

The Board on August 23 revoked private pilot certificate No. 19778, held by Hubert Eichhammer, Whiteville, N. C., for piloting an aircraft acrobatically over a congested area and other violations of the Civil Air Regulations.

ORDER No. 631: *Private pilot certificate of William Wivell revoked.*

The Board on August 23 revoked private pilot certificate No. 32682-40, held by William Wivell, St. Cloud, Minn., for piloting an aircraft below 1,000 feet over a congested area and other violations of the Civil Air Regulations.

ORDER No. 632: *Consolidated applications of Continental, United, Braniff, and TWA into one proceeding.*

The Board on August 23 consolidated application of Continental Air Lines, Inc., for an amendment to its existing certificate of public convenience and necessity for route 43 authorizing an extension from the present intermediate point, Hutchinson, Kans., to the proposed coterminal point, Kansas City, Mo., via Salina, Kans., and Topeka, Kans., into one proceeding with the applications of United Air Lines Transport Corp., Braniff Airways, Inc., and Transcontinental & Western Air, Inc.

ORDER No. 633: *Instituted investigation to determine whether round-trip service operated by Canadian Colonial between New York and Niagara Falls is in violation of provisions of Civil Aeronautics Act of 1938 (Docket 463).*

The Board on August 23 instituted an investigation to determine whether the conduct of the daily scheduled round-

trip service operated by Canadian Colonial Airways, Inc., between New York, N. Y. and Niagara Falls, N. Y., is or may be in violation of the provisions of the Civil Aeronautics Act of 1938.

ORDER No. 634: *Revoked instructor rating held by William Edward Angel.*

The Board on August 23 revoked the instructor rating held by William Edward Angel, Compton, Calif. (Order accompanied by opinion—Docket SR-29.)

ORDER No. 635: *Adopted order fixing rates of compensation for transportation of mail by United over routes 1, 11, 12, and 17.*

The Board on August 26 adopted a supplemental order fixing and determining the fair and reasonable rates of compensation for the transportation of mail by United Air Lines Transport Corp. over routes Nos. 1, 11, 12, and 17. (Order accompanied by opinion—Docket 16-406 (A)-1.)

ORDER No. 636: *Student pilot certificate of Leo August Cetti revoked.*

The Board on August 27 revoked student pilot certificate No. S-120084, held by Leo August Cetti, Fresno, Calif., for performing aerobatics, although not equipped with a parachute, and other violations of the Civil Air Regulations.

ORDER No. 637: *Approved an agreement relating to handling of literature through agents between certain air carriers.*

The Board on August 27 approved an agreement relating to handling of literature through agents between certain air carriers. (Contract C. A. B. No. 125.)

ORDER No. 638: *Approved agreement relating to publicizing of safety and navigational devices between certain air carriers.*

The Board on August 27 approved an agreement relating to publicizing of safety and navigational devices between certain air carriers. (Contract C. A. B. No. 126.)

ORDER No. 639: *Granted petition of Braniff Airways to amend its certificate for route No. 50.*

The Board on August 27 granted petition of Braniff Airways, Inc., to amend its certificate of public convenience and necessity for route No. 50 so as to authorize the transportation of persons, property, and mail between Houston, Tex., and San Antonio, Tex., and between Houston, Tex., and Corpus Christi, Tex. (Order accompanied by opinion—Dockets 317 and 322.)

SEPTEMBER 15, 1940

SPECIAL NOTICE

Economic Opinions of the Civil Aeronautics Board Available in Printed Pamphlets—Sold Individually or on Subscription Basis

THE CIVIL AERONAUTICS JOURNAL carries in this section an abstract of all rules, regulations, and orders, and a syllabus of all opinions issued by the Civil Aeronautics Board during the half-month ending 2 weeks prior to the date of publication.

All opinions of the Board in economic proceedings now are printed individually and may be obtained on a subscription basis.

Subscriptions for economic opinions will be by volume rather than for specific periods of time. Each volume will comprise approximately 800 pages of printed opinions which ultimately will make up a bound volume of CIVIL AERONAUTICS BOARD REPORTS.

For example, opinions issued subsequent to June 30, 1940 (now being printed) are paginated consecutively from 1 to 800, irrespective of the intervals between publication of individual opinions. The same plates used in printing the "advance sheets" later will be used to print the bound volumes.

The first volume of opinions, comprising all decisions of the independent Civil Aeronautics Authority from the time of its inception to June 30, 1940, when it was transferred to the Department of Commerce, is called CIVIL AERONAUTICS AUTHORITY REPORTS, Volume 1. The next volume, of which currently issued opinions will form a part, will be called CIVIL AERONAUTICS BOARD REPORTS, Volume 2.

CIVIL AERONAUTICS AUTHORITY REPORTS, Volume 1, now is being printed, and notice will be given on this page when it is placed on sale.

The subscription price for each volume of "advance sheets" of economic opinions is \$1. Remittance should be made to the Superintendent of Documents, Government Printing Office, Washington, D. C.

For those who do not wish to subscribe to the complete volumes, the "advance sheets" of economic opinions may be purchased individually. As each opinion becomes available in printed form, the title of the case, docket number, order number, date, and price will be listed in the Official Actions section of the JOURNAL. All orders must be sent to the Superintendent of Documents.

Opinions in cases of suspension, revocation, or denial of airman certificates are available in mimeograph form only. Verbatim copies of these may be obtained by addressing a request to the Publications and Statistics Division, Civil Aeronautics Administration, Washington, D. C.

ORDER No. 640: *Pan American temporarily exempted from certain provisions of the Civil Aeronautics Act of 1938.*

The Board on August 29 temporarily exempted Pan American Airways, Inc., from certain provisions of the Civil Aeronautics Act of 1938 permitting it to engage in air transportation with respect to persons, property, and mail to and from Barreiras, Brazil, as an intermediate point between the intermediate points Belem (Para) and Rio de Janeiro, Brazil.

ORDER No. 642: *Austin Chamber of Commerce denied leave to intervene in proceeding involving certain applications.*

The Board on August 30 denied the Austin, Tex., Chamber of Commerce leave to intervene in proceeding involving applications of Continental Air Lines, Inc., Braniff Airways, Inc., Essair, Inc., A. J. Burke, and Transcontinental & Western Air, Inc., for certificates of public convenience and necessity involving certain routes in the State of Texas.

ORDER No. 643: *Abilene Chamber of Commerce denied leave to intervene in proceeding involving certain applications.*

The Board on August 30 denied the Abilene, Tex., Chamber of Commerce leave to intervene in proceeding involving applications of Continental Air Lines, Inc., Braniff Airways, Inc., Essair, Inc., A. J. Burke, and Transcontinental & Western Air, Inc., for certificates of public convenience and necessity involving certain routes in the State of Texas.

ORDER No. 644: *Approved interlocking relationships of Winston W. Kratz and Marquette Airlines.*

The Board on August 30 approved interlocking relationships of Winston W. Kratz and Marquette Airlines, Inc., and other companies.

ORDER No. 645: *Granted authorization to navigate Brazilian registered aircraft in United States and Panama Canal Zone.*

The Board on August 30 granted the request of the Brazilian Embassy in Washington for permission for the flight of a Stinson reliant series 9 aircraft, bearing Brazilian identification marks PP-TCM No. 139, to navigate and land in the Panama Canal Zone en route from Brazil to the United States, and in the territory of the continental United States, subject to the terms and conditions of the "Authorization to Navigate Foreign Aircraft in the Continental United States and the Panama Canal Zone."

REGULATIONS

REGULATION No. 105: *Adopted amendment No. 67 of the Civil Air Regulations.*

The Board on August 20 adopted amendment No. 67 of the Civil Air Regulations entitled "Exceptions to Physical Requirements."

REGULATION No. 106: *Authorized Pan American to issue free transportation on flight from San Francisco to Auckland, New Zealand, and return.*

The Board on August 22 authorized Pan American Airways Co. (Nev.) to issue "Free transportation for certain persons as observers on flight from San

Francisco, Calif., to Auckland, New Zealand, and return."

REGULATION No. 107: *Adopted amendment No. 68 of the Civil Air Regulations.*

The Board on August 27 adopted amendment No. 68 of the Civil Air Regulations entitled "Aircraft Engine Log Books."

REGULATION No. 108: *Adopted amendment No. 69 of the Civil Air Regulations.*

The Board on August 27 adopted amendment No. 69 of the Civil Air Regulations striking section 04.000.

REGULATION No. 109: *Adopted amendment No. 70 of the Civil Air Regulations.*

The board on August 27 adopted amendment No. 70 of the Civil Air Regulations entitled "Redesignation of Control Zones of Intersection and Certain Airway Traffic Control Areas."

REGULATION No. 110: *Adopted amendment No. 71 of the Civil Air Regulations.*

The Board on August 27 adopted amendment No. 71 of the Civil Air Regulations entitled "Redesignation of Radio Fixes, Control Zones of Intersection, and Airway Traffic Control Areas."

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